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GERMAN CURRENCY: ITS COLLAPSE AND RECOVERY, 1920-6

THE PRESIDENTIAL ADDRESS OF

THE RIGHT HON. VISCOUNT D'ABERNON,
G.C.B., G.C.M.G.

(*Delivered to the Royal Statistical Society, November* 16, 1926.)

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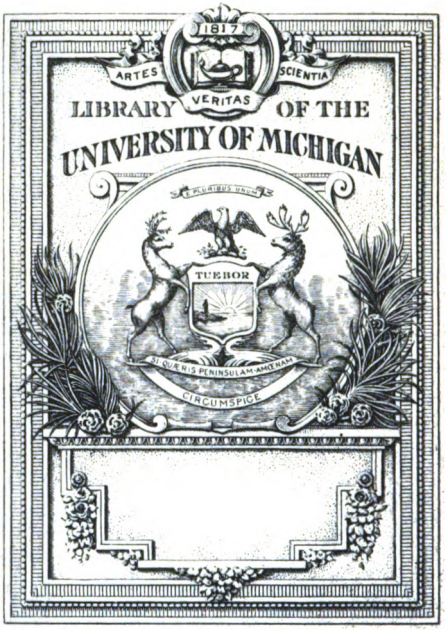

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INTRODUCTORY.

I HAVE thought that the best contribution I could make to the records of the Society would be an endeavour to set forth the principal features of the recent history of German currency, both as to its

* Mr. H. C. F. Finlayson, Financial Secretary to the British Emassy, Berlin, has given invaluable assistance in the preparation of this paper.

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collapse and recovery during the years 1920–6, supplementing my statement with certain relevant tables of statistics.

It is, of course, impossible within the limits of a Presidential Address to do more than survey the main events of the period. A complete history will, I trust, be written, as it would supply future generations of financially distressed peoples with lessons of valuable experience. The absence of reasoned accounts of past currency crises is probably one of the main reasons why the world to-day is so ignorant of the subject. Had a full, accurate and impartial narrative existed of the currency adventures in France between 1790 and 1800, it is not impossible that both Germany and France would have avoided many of the mistakes that have caused them recent trouble.

A striking proof that an impartial account of what occurred in Germany may be of use is to be seen in the fact that, although the German crisis is only three years old, similar errors of currency policy are to-day being committed in other countries.

I.—DECLINE OF THE MARK, 1920–3.

The phase of financial bankruptcy which Germany lived through in 1920–3 had two features of special interest.

2. In the first place, the crisis was unprecedented in severity among modern industrial states; in the second, the development of the crisis was true to standard type. Result followed cause in the financial world, in accordance with what should have been theoretical expectation. Nothing occurred which could not be explained by known law, or which could not have been anticipated from a knowledge of what had previously occurred elsewhere. The case was, however, at once normal and abnormal; normal in its truth to type, abnormal in its violence and magnitude.

3. It may, therefore, be said to belong to those examples which are at once suitable for a text-book, and to those tales of wonder and adventure which owe their interest to the extravagance of the facts recounted.

4. The development of events will be made more clear if the essential fact is grasped that the period from 1920 to 1926, with which I propose to deal, is divided into two clearly distinguished periods. The years of decline were 1920–3, the years of recovery 1923–6. The climax was reached in the autumn of 1923, when German exchange had fallen to one-billionth (*i.e.* a million-millionth) of its original value, and the old German mark was no longer accepted in payment by the population, when grave political trouble and rapid process

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of dismemberment threatened the Reich. The progress of recovery since that date has been remarkable; to-day currency is firmly established—the budget is in equilibrium. While the financial world is not yet prosperous, it is working on normal lines towards prosperity.

Causes of the mark disaster.

5. The real causes of the catastrophic fall in the German mark are easy to find. The disaster arose essentially from two prime causes:—

(*a*) Inadequate appreciation of the danger involved in an ill-regulated issue of bank-notes,

(*b*) Demands for reparation payments, involving forced public expenditure without regard to the effect of these payments on State finance.*

(*a*) *Excessive and unregulated note-issues.*

6. Recovery commenced directly unrestrained issues stopped. But until the death of Dr. Havenstein and the appointment of Dr. Schacht in his place as President of the Reichsbank, accompanied by the nomination of Dr. Luther as Minister of Finance, there was no effective financial check, nor the indication among responsible officials of any correct diagnosis of the position or of any will-power capable of dealing with the crisis. Dr. Havenstein, then President of the Reichsbank, speaking before the Reichsrat on August 7, 1923 (the £ then stood at 15 millions of paper marks), said: "The Reichsbank to-day issues 20 thousand milliards of new money daily. The note-issue at present amounts to 63 thousand milliards: in a few days, therefore, we shall be able to issue in one day two-thirds of the total circulation." This declaration elicited no protest and excited no public disapproval.

7. The principal feature of Germany in 1923 (the climax year of inflation) was that industry enjoyed the illusion of fortune, while living in a state whose finance and currency were completely disorganized. The ledgers of German industry showed enormous paper-mark profits, but in the end it was realized that the paper it had gained was worthless; at the same time an analogous process was

* It might appear more logical to invert the above order, on the supposition that reparation demands made inflation inevitable. But this would be historically false; inflation was resorted to in Germany during the war years. Reparation demands were an aggravating, not an initial, cause.

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followed regarding reparations. Immediate payments or immediate profit were demanded in money; the basis which could alone ensure a permanent flow of monetary payments or profit, *i.e.* a stability in the purchasing power of the money, was never given the importance it deserved. It is true that the Reparation Commission made constant efforts to induce the German Government to institute a radical reform of taxation and currency, but they were never prepared to give the German Government a long enough breathing space to enable them to carry through such a programme. In this connection two elements must be taken into account—

(1) The current views held on currency;

(2) The credit policy of the Reichsbank.

(1) *Current views on currency.*

8. Budgetary deficits and currency instability are to some extent cause and effect; the greater the gap in the budget, the greater is the necessity of finding means to fill the gap. In Germany of 1923, the *normal* resources of taxation being found insufficient, one administration after another was compelled to resort to *abnormal* (or, indeed, illegitimate) resources, *i.e.* each attempted to meet current necessities by the printing-press.

9. It should be mentioned in this connection that the extravagance of Havenstein's statement above quoted was realized neither by the Government nor by the majority of German financial and industrial leaders. Havenstein's views on currency were shared even by responsible ministers of the highest reputation and ability. In accordance with the principles of this school of economic thought, the amount of *internal* currency in circulation had little influence on its *external* value. The latter was determined, so they contended, mainly by the passivity or activity of the trade balance.

10. Under such theoretical advice, what were the German Government to do? They acted on the principle that, as there was an admitted monetary scarcity, the natural, if not the only, way to cure it was to increase the circulation. The results were remarkable, as the following table shows:—

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Table of Reichsbank notes issued and equivalent sterling values.

Date.	Reichsbank notes in circulation.	Rate of exchange of day.	Equivalent sterling value of notes in circulation.
	(Milliards of paper marks.)	(Marks for £.)	(£ millions.)
Dec. 31, 1919	35·7	184·8	193 2
Dec. 31, 1920	68·8	258·0	255·5
Dec. 31, 1921	113·6	771·0	147·3
Dec. 31, 1922	1,280·1	34,000·0	34·4
Jan. 31, 1923	1,984·5	227,500·0	8·7
Feb. 28, 1923	3,512·8	106,750·0	33·0
March 29, 1923	5,517·9	98,500·0	56·0
May 31, 1923	8,563·7	320,000·0	26·8
June 30, 1923	17,291·1	710,000·0	24·3
July 7, 1923	20,341·8	800,000·0	25·4
July 14, 1923	25,491·7	900,000·0	28·3
July 23, 1923	31,824·8	1,600,000·0	20·0
July 31, 1923	43,594·7	5,000,000·0	8·7
Aug. 7, 1923	62,326·7	15,000,000·0	4·1
Aug. 15, 1923	116,402·5	12,400,000·0	8·9
Aug. 23, 1923	273,905·4	23,000,000·0	11·9
Sept. 15, 1923	3,183,681·2	410,000,000·0	7·8
Oct. 15, 1923	123,349,786·7	18,500,000,000·0	6·8
Nov. 15, 1923	92,844,720,743·0	11,000,000,000,000·0	8·4
Nov. 20, 1923	180,000,000,000·0 (approx.)	18,000,000,000,000·0	10·0

11. It would be difficult to find a better example of the inexpediency of the dog trying to chase its tail. Copernicus, writing to King Sigismund of Poland in 1596, said: "Money loses in value when it has become too much multiplied." The German Government in multiplying its amount diminished the value of the currency—not only of each unit but of the aggregate total circulation—and it was realized only later that the sole way of increasing the total value of the circulating medium was to raise the value of the units by strict limitation of output, and by subjecting the issues to clearly specified conditions.

12. The pre-war average circulation in Germany was approximately equal to £300 millions, whereas from August, 1923, until the period of stabilization the whole *Reichsbank* and *authorized* Government issues could have been bought up, on a basis of gold, at a figure in the neighbourhood of £10 millions. The more notes the Reichsbank issued, the less the aggregate exchange value of the notes in circulation became. Quality, or value in the world market, decreased more rapidly than quantity could be increased; and this,

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although every effort was made to stimulate note output.* The question, then, arises: how did Germany carry on business under such extraordinary conditions? The answer is twofold:—

(*a*) The velocity of circulation of the currency increased enormously;

(*b*) The currency gap was filled by emergency tokens (Notgeld) issued by various public administrations and by private persons, and to a certain extent by foreign bank-notes.†

13. Velocity of the circulation of the notes played an important part. True, Germany's population had diminished by some 10 millions; territories had been taken away, while business had contracted. On the other hand, payment by cheque had ceased to exist, and there was the "flight from the mark." Notes were held no longer than could be helped; they were turned into goods, or exchanged against foreign currencies (Devisen).

14. By a law of July 17, 1922, amended on October 26, 1923, permission to issue emergency tokens was granted by the Minister of Finance, if a real emergency was recognized to exist, *e.g.* if the Reichsbank was unable to satisfy the demands of industry for the payment of wages. As a condition of such issues it was stipulated that an asset had to be deposited in the Reichskreditgesellschaft (a semi-official Reich's banking institution) in favour of the Minister of Finance; if and when the tokens were called in, this deposit was released. But over and above these *authorized* issues, the whole

* It is of interest to observe that there has been a similar development in France, as the following figures indicate:—

	Notes in circulation.	Value converted at average rates of exchange.
	(Milliards of paper francs.)	(Milliards of gold francs.)
Average, 1923	37,152·1	11,679·4
,, 1924	39,954·8	10,819·0
,, 1925	44,296·3	10,894·2
January, 1926	50,617·9	9,885·7
February, 1926	50,991·1	9,698·5
March, 1926	51,491·8	9,551·7
April, 1926	52,208·2	9,140·7
May, 1926	52,735·0	8,606·4
June, 1926	53,073·2	8,083·1
July, 1926	56,021·7	7,282·8

† It should, of course, be observed that the currency gap was filled to a certain extent by foreign bank-notes. These, however, were not *German* issues. Their amount cannot be estimated with accuracy.

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country was inundated with unauthorized " Notgeld," without any pretence to cover at all, whose amount in January, 1924, was estimated at 159·6 millions of gold marks.*

(2) *The credit policy of the Reichsbank.*

15. With the views generally held in Germany regarding currency theory, it is not surprising that inflation went on apace. The evil was, moreover, aggravated by the remarkable credit policy of the central bank of issue.

16. According to the terms of the Bank Law of 1875, the Reichsbank note-issue was covered up to one-third by gold, and for the other two-thirds by discounted bills of not more than three months' date guaranteed by at least two persons of known solvency. Now, it should be observed that Treasury bills did not fall under this category and could not then be used as backing for the note-issue. At the outbreak of war, regard being had to the abnormal currency needs, an Act was passed, whereby Treasury bills were put on the same footing as trade bills of exchange. Henceforward the Reichsbank was enabled to hold them against note-issues—the first stage of inflation (the " Helfferich " stage) had begun. But it was nothing

* In January, 1924, the following emergency instruments of payment (authorized and unauthorized " Notgeld ") were in circulation :—

	Millions of gold marks.	
(1) *Instruments expressed in paper marks :—*		
(*a*) Notgeld issued by the railways and secured by a deposit of 90 millions of Rentenmarks at the Reichsbank		56·0
(*b*) Notgeld issued against deposit of security		1·4
(*c*) Notgeld issued *without cover :—*		
(i) Occupied territory	132·0	
(ii) Unoccupied territory	27·6	
		159·6
		217·0
(2) *Instruments expressed in gold or having fixed value :—*		
(*a*) Notgeld secured by 6 per cent. Treasury bonds		110·0
(*b*) Notgeld issued by railways and secured by 6 per cent. Treasury bonds....		131·9
		241·9

Cf. Annex VII of the " Report of the First Committee of Experts (Dawes Committee)." Cmd. 2105.

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in comparison with the "Havenstein" stage, as the following table will show :—

Trade and Treasury bills. Table showing the bills' portfolio of the Reichsbank.

	Gold reserve.	Trade bills of exchange.	Discounted Treasury bills.	Notes in circulation.
	(Millions of gold marks.)	(Milliards of paper marks.)	(Milliards of paper marks.)	(Milliards of paper marks.)
Dec. 31, 1913	1,170	1·5	0·3	2·6
July 31, 1914	1,253	2·1	0·3	2·9
Dec. 30, 1916	2,520	0·7	8·9	8·1
Dec. 31, 1918	2,262	0·3	27·2	35·7
Dec. 31, 1920	1,092	3·0	57·6	68·8
Dec. 31, 1921	995	1·1	132·2	113·6
Dec. 31, 1922	1,005	422·2	1,184·5	1,280·1
April 15, 1923	1,005	2,587·0	5,441·0	5,838·0
June 30, 1923	717	6,914·0	18,338·0	17,291·0
Sept. 15, 1923	490	703,029·0	3,808,433·0	3,183,681·0
Oct. 15, 1923	444	29,541,600·0	167,779,600·0	123,349,786·7
Nov. 15, 1923	467	39,529,577,000·0	189,801,468,000·0	92,844,720,743·0

17. No effective measures were taken by the Reichsbank to put an end to such excessive credit issues. As an illustration of the state of men's minds at the time, it would not be out of place to refer to the decision taken by the Central Committee of the bank on August 2 1923. Havenstein stated that it was not the duty of a central bank of issue to make the rate of interest, but to follow the market rate. He consequently proposed to raise the bank rate from 18 per cent. to 30 per cent. Now, it is regrettable that Havenstein did not draw the proper conclusion from his premis, for the current market rates being 3–4 per cent. per week, the bank rate should have been raised to nearer 200 per cent. But the interesting point is, that the members of the Committee did not support the President's motion, *not* because the rate proposed was *not* high enough, but because they were opposed to any increase in the bank rate at all. It may safely be asserted that throughout 1921, 1922, and the first half of 1923 a majority of the banking world were either in favour of increased note-issues or regarded such issues as inevitable. They were frankly hostile to any departure from the Havenstein policy. It is interesting to note that the capitalist class, which finally lost all its invested savings through inflation, was at no time hostile to the steps which led to this loss. Temporary gain, or the illusion of it, obscured the inevitable final disaster.

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(*b*) *Reparation payments and enforced expenditure.*

18. We now pass to the second great cause of the mark disaster, viz. enforced State expenditure. On the budget side the main troubles were :—

(*a*) From 1920 onwards Germany was called upon to make reparation payments, without regard being had to the question whether such payments could be obtained either from existing or possible tax revenues or from loan operations of the State, which would divert to its uses the real, not fictitious, savings of the people.

(*b*) During 1923, the year of supreme disaster, Germany, through political circumstances not within her own control, made public expenditure on a colossal scale in the Ruhr.

19. Dealing first with the early years, the initial inactivity of the Reparation Commission between January 10, 1920, and April 30, 1921, was reflected in the relative calm of the mark exchange during that period. It is, of course, true that the general tendency of the exchange market was weak, but it was not disastrously so. Indeed, we can say that the year 1920 and the first quarter of 1921 were periods of comparative " stability," as the following *average monthly* rates will show :—

1920.	Marks to £.	1920.	Marks to £.
January ...	... 233	October ...	... 236
February ...	... 335	November ...	... 265
March ...	... 305	December ...	... 254
April ...	... 235		
May ...	... 179	1921.	
June ...	... 154	January ...	... 243
July ...	... 152	February ...	... 237
August ...	... 171	March ...	... 244
September	... 203	April... ...	... 249

20. Article 233 of the Treaty of Versailles provided that the findings of the Reparation Commission in regard to the amount of damages inflicted by Germany in the war had to be concluded and notified to the German Government on or before May 1, 1921. The Reparation Commission fixed the sum at 132 thousand millions of gold marks (£6,600 millions). An interallied conference met in London in May, 1921, and determined the schedule of payments that the German Government had to meet. An important provision of the so-called " London Ultimatum " laid down that Germany must pay a sum in cash of 1 thousand millions of gold marks (£50 millions) before the end of August, 1921. That payment was

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duly met, but the German Government had to borrow about two-thirds from the firm of Mendelsohn and Company, repayable before the end of the year. This operation is likewise reflected in the exchange rates. The monthly averages of the second half of 1921 were :—

	Marks to £.		Marks to £.
May	247	September	390
June	261	October	582
July	278	November	1,041
August	307	December	794

21. The year 1922 was fated to lead to disaster. The Committee of Guarantees, set up under the authority of the London Conference, instituted a system of ten-day cash payments, each of 31 millions of gold marks (£1,550,000). This system was continued under the decisions of the Cannes Conference (January, 1922) until it became impossible to find the money. By the middle of May the German Government had asked for a moratorium. After a deal of fruitless discussion, it was finally decided in August, 1922, that Germany should make out four Reich's Treasury bills to the order of the Belgian Government, which were afterwards paid out of the gold reserves of the Reichsbank. The average monthly rates of exchange for 1922 were :—

	Marks to £.		Marks to £.
January ...	811	July	2,200
February ...	907	August	5,074
March	1,245	September ...	6,502
April	1,285	October	14,145
May	1,294	November ...	32,146
June	1,410	December ...	34,858

22. It should be observed that throughout these early reparation years the Reparation Commission did constantly draw the attention of the German Government to the necessity of covering their budgetary deficits, but the German Government were either unwilling or unable to give effect to reforms on the necessary scale. The Reparation Commission obviously could not accept inflation as a reason for renouncing reparations but, on the other hand, the Allied Governments were not prepared to give a sufficiently large inducement to the German Government to renounce their policy. It needed a complete collapse, such as took place later, to bring both parties to a realization of the economic necessity of postponing reparations to an effective stabilization of the currency. The fact

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that reparations were being paid, not out of tax surpluses but by unrestrained printing of notes—a process inevitably destructive of the financial capacity of the debtor—was therefore partially responsible for the mark disaster, but a larger responsibility must undoubtedly be attributed to the weakness of the Reich's financial system and its tolerance of the wild currency policy of the Reichsbank.

23. During 1923 the Ruhr territory was occupied by Franco-Belgian troops; a foreign administration seized the Customs and levied other imposts. Not only was a valuable economic area separated administratively from Germany, but important revenues were destroyed or diverted to foreign treasuries—destruction occurring to a larger extent than diversion. At the same time, the Reich—to support passive resistance—elected to make colossal payments in aid of its citizens in the Ruhr, with disastrous effect on the budget and the mark exchange. The average monthly rates for 1923 were :—

	Marks to £.
January	83,190
February	130,750
March	99,526
April	113,584
May	219,821
June	507,567
July	1,594,760
August	21,040,000
September	449,375,000
October	112,503,000,000
November	9,604,000,000,000
December	18,349,000,000,000

24. It would be futile to set out budgetary statements for the two fiscal years 1922–3 and 1923–4, as the figures were hopelessly out of date, by reason of the ever-rising prices, even on the publication of the official estimates. Throughout the inflation period no real budgeting was done; the Government lived on borrowing, open credits being available at the Reichsbank against Treasury bills. It was an era of unrestricted and unlimited floating debt.

25. By midsummer, 1923, things had come to a desperate pass. Dr. Hermes was then Minister of Finance, and on July 7 he set forth the following position of the Reich's finances before the Reichstag: On July 7 the external value of the mark had depreciated roughly to a twenty-fifth of its value of January 1; from April 1

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to the middle of June tax receipts totalled 2,447,000 millions of paper marks, but outgoings had required 10,330,000 millions of paper marks, *i.e.* 24 per cent. of the liabilities had been covered by taxation while 76 per cent. had been borrowed; the floating debt which stood at the end of November, 1922, at 839 milliards of paper marks, had risen by April 1, 1923, to 8,000 milliards of paper marks, and by the end of June to 10,275 milliards of paper marks.

26. The financial position was roughly this:—

1923.	Payments.	Percentage covered by taxation.
	(Millions of paper marks.)	
March	3,800,000	21
April	2,339,079	22
May	3,181,357	43
June	12,407,919	5·3
July	35,575,483	3·4

Floating debt (discounted Treasury bills).

	(Milliards of paper marks.)
January 11, 1923 (date of Ruhr invasion)	1,600·0
August 31, 1923	1,196,295·0

II.—The Climax of the Crisis, August, 1923.

27. On August 8, Dr. Hermes published his new tax proposals, the purpose of which was "a frontal attack on the floating debt." He hoped that, by a three-sided offensive, he would be able to drain off the greater part of this enormous mass of paper marks into the exchequer. His scheme was:—

(*a*) Increased taxation of income of private persons and companies;

(*b*) A "Rhine-Ruhr sacrifice," a sort of super income tax;

(*c*) The issue of a gold loan.

28. It is worthy of notice that the sequence of events and the development of tax reform follow a similar course in all countries. In many cases an attack on the floating debt takes precedence of a restriction of currency and a rigid curtailment of note-issues. This is rarely effective. A Finance Minister who is constantly

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embarrassed by the threat of a floating debt, tends to think it is the supreme cause of his difficulties. As a matter of fact, it is the result of another, but seldom recognized, cause, viz. the ever-widening gap between the income and the outgoings of the State, resulting from the continuous rise of prices, caused by constantly increasing issues of bank-notes.

29. Before the Hermes' schemes could be carried out by their author, however, the Cuno Government fell and Dr. Stresemann became Chancellor, Dr. Hermes being replaced at the Treasury by Dr. Hilferding. In his ministerial declaration of August 24, Dr. Hilferding admitted that the public finances had completely broken down. He could suggest no other method of dealing with the situation than that proposed by his predecessor. The foregoing measures, therefore, became law.

30. The results were disappointing, as can be seen from the following table :—

1923.

[Billions of paper marks.]

	September.	October.
(1) *Receipts*—		
(1) General taxation	1,309·3	87,477·9
(2) Gold loan	1,077·8	51,321·0
(3) Discounted Treasury bills (floating debt)	44,427·4	6,782,070·0
	46,814·5	6,920,868·9
(2) *Payments*—		
(1) General administration	33,255·8	4,356,465·2
(2) Peace Treaty charges	988·7	159,921·4
(3) Deficits on posts and railways	12,570·0	2,404,482·3
	46,814·5	6,920,868·9

31. Now it will be observed from the foregoing statement that :—

(*a*) The yield from pure taxation (*i.e.* exclusive of the gold loan) in September, 1923, represented 2·7 per cent. of the total payments, the corresponding figure for October, 1923, being 1·2 per cent. ;

(*b*) The deficits were met almost entirely by the process of note-printing (*i.e.* as a result of discounting Treasury bills at the Reichsbank).

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32. The general financial development can best be seen in the following table :—

Receipts and payments of the German Government up to the middle of November, 1923.

1923.	Payments.	Receipts from taxes and fees.	Receipts in percentage of payments.
	(Millions of paper marks.)	(Millions of paper marks.)	Per cent.
Jan., first ten days	162,480	46,375	28·5
Feb. ,, ...	484,544	150,509	31·0
Mar. ,, ...	848,311	31,289	1·9
April ,, ...	777,930	175,000	22·5
April, second ten days	885,328	145,080	16·5
April, third ten days	675,821	178,033	26·3
May, first ten days	705,782	600,348	85·0
April, second ten days....	835,498	570,763	61·0
May, third ten days	1,640,077	283,558	17·2
June, first ten days	1,795,432	226,578	12·6
June, second ten days	2,794,942	280,653	10·0
June, third ten days	7,817,545	155,885	2·0
July, first ten days	5,376,483	259,508	4·1
July, second ten days	12,399,000	509,400	4·1
July, third ten days	17,800,000	460,100	2·6
Aug., first ten days	61,191,000	1,791,000	2·9
Aug., second ten days	247,970,000	4,340,000	1·8
Aug., third ten days	866,741,000	6,355,000	0·7
Sept., first ten days	1,302,812,000	49,905,000	3·8
Sept., second ten days	5,445,794,000	84,560,000	1·5
Sept., third ten days	40,065,854,000	81,848,000	0·2
Oct., first ten days	43,230,293,800	393,366,434	0·9
Oct., second ten days	324,117,027,171	2,456,918,405	0·8
Oct., third ten days	6,553,521,615,256	5,903,178,801	0·09
Nov., first ten days	57,901,569,000,000	53,449,000,000	0·09
Nov., second ten days	54,343,869,000,000	834,325,000,000	1·5

33. From the foregoing it is obvious, even to the most casual observer, that no effective results could emerge unless and until some form of stable currency was set up. There was no hope while the printing-press was daily discharging its mass of paper. To appreciate the extent of the catastrophe let us again look at the outstanding figures :—

34. *Stage* 1. *January* 11 *to April* 18, 1923.—During this period the Reichsbank issues increased threefold (roughly from 2,000 to 6,000 milliards), while the rate of exchange on London dropped from 48,500 to 115,000 marks to the £.

35. *Stage* 2. *May to end of September.*—The note-issues rose from 6,000 milliards to approximately 30,000,000 milliards, or five-

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thousandfold, while the mark exchange fell from 115,000 to 1,000,000 to the £, *i.e.* roughly to a thousandth of its value.

36. *Stage* 3. *The final catastrophe.*—On November 15 the note circulation had risen to 92,844,720,743,030 millions of paper marks, or an increase over the week previous of 73,691,633,274,123 millions; on November 20 the £ was quoted at 18,000,000 millions of paper marks.* The end had come—the mark had lost all meaning; it was no longer a medium of exchange.† The people refused the currency in exchange for goods and finally refused to open their shops.

Application of ineffective remedies.

37. We have examined the two main causes of the mark disaster, viz. (*a*) unrestricted note-issues, and (*b*) enforced budget expenditure. It is, however, important for our purposes to study the abortive attempts that were made throughout 1923 to correct the essential fallacy of excessive note-issues. These measures, which history shows that embarrassed Governments invariably resort to—and which are of more than doubtful efficacy—may be classified as "Ineffective Correctives of a Fundamental Error."

38. They were:—

(1) The policy of the so-called mark intervention whereby the Reichsbank succeeded in losing the main portion of its gold reserve.

(2) The legislation to control dealings in foreign exchange, whereby a whole network of artificial measures was built up in the vain hope of establishing some species of equilibrium.

(1) *The mark intervention.*

39. Upon the occupation of the Ruhr territory by the French and Belgian forces, the German Government decided to try to arrest the fall of the mark on foreign bourses through the intermediary of the Reichsbank. The motives of this action are set out in Reichstag paper No. 6591 (series 1923) and may be thus resumed:—

The German Government considered how far and by what means

* This corresponded to the depreciation of sterling on New York at the time.

† It should perhaps be mentioned that Germany was at this time on the verge of serious internal disturbance. The mainspring of the discontent was the purchasing value of workmen's wages. The average pre-war wage was round about 36 gold marks per week. In October, 1923, the purchasing power of their wages fell to 18·9 per cent. of the normal, or about 6—8 marks (*i.e.* 6*s.* to 8*s.*) per week.

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measures could be taken to counteract the Franco-Belgian action, and it was apparently clear to them that one of the most effective measures of defence would be to make an attempt to keep the cost of living in Germany at the same level as before, and not to weaken the policy of passive resistance on the part of the Rhine-Ruhr population by any increase in such costs.

40. In their action in support of the mark, the procedure of the German Government was twofold :—

(*a*) Active Government intervention in the foreign-exchange market, *i.e.* offering foreign exchange (Devisen) for sale both at home and abroad against paper marks.

(*b*) Rationing of foreign exchange purchases, with a view to compelling those in possession of foreign currencies to surrender them, so that the " Devisen " might not be used for speculative purposes but diverted to legitimate productive needs.

41. Two periods of active intervention are clearly distinguishable :—

(*a*) January 12–April 18, 1923, the day when the exchange broke.

(*b*) May–October, 1923, a period characterized by the depletion of the Reichsbank's gold reserve, and abortive attempts at legislation in control of the foreign exchange market.

(*a*) *First period.*

42. Active intervention started about the middle of January, 1923, by the purchase of paper marks at home and in foreign places against foreign currencies. The first attempts were not attended by much success ; on January 12 the £ was quoted at 48,650 paper marks, by the end of the month it had risen to 227,500 paper marks. This sudden depreciation was attributed to mere panic, and it was resolved to intervene on a larger scale both in Berlin and abroad. The result was that by the first week of March the mark had recovered to 98,250 paper marks to the £, and this rate was maintained until April 18, when, as the result of a demand by Hugo Stinnes for £93,000 in foreign bills to meet the coal acceptances of the German railways, the market was completely broken, the £ rising on April 19 to 140,000 paper marks. It was then decided to let the exchange slide, and to start another policy of " rationing " foreign currency requirements by legislative process.

43. So ended the first phase of the battle. How was it financed,

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and how much did it cost ? The true facts and figures never leaked out, but Havenstein, in his evidence before the Reichstag Committee (Reichstag Paper, No. 6591), admitted that it had become clear in the middle of April that the Ruhr struggle would be protracted, and that even if the Reichsbank had sacrificed its gold reserve, it would have been necessary to find further sinews of war.

(*b*) *Second period.*

44. Intervention during the second period was not a continuous process ; action was taken spasmodically, and merely resulted in the steadying of the exchange at certain levels for a few days at a time. It was a policy of despair, whose effect was mainly to benefit speculators who profited by Government intervention to pick up foreign currencies at artifically low paper-mark prices.

45. The great characteristic of this period was the depletion of the Reichsbank gold reserves and foreign bills' portfolio. This movement can be seen in the following table :—

Reichsbank's gold reserve.

1923.	Millions of gold marks.	£ millions.
January 1	1,005 =	50·2
April 30	920 =	46·0
May 15	842 =	42·1
July 15	657 =	32·8
November 23	467 =	23·3

46. Thus during eleven months the gold reserve diminished by a sum of 538 millions of gold marks (£26,900,000), but it would be incorrect to suppose that all this gold was used to intervene in support of the mark. There were other pressing claims that had to be met.

(*a*) *Belgian (reparation) bill acceptances.*

47. Four Treasury bills for the account of the Belgian Government, duly endorsed by the Reichsbank, were paid out of the gold reserves, viz. :—

	Millions of gold marks.
March 15, 1923	48·6
April 15, 1923	47·5
May 15, 1923	58·5
June 15, 1923	52·0
	206·6

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(*b*) *Maintaining the spirit of passive resistance.*

48. Of the remaining 331·4 millions of gold marks, part of that sum—it is impossible to indicate the exact amount, but it is estimated at one-third—was used to meet Government imports necessary to maintain the spirit of passive resistance in the Ruhr, *e.g.* imports of food and British coal for the railways.

(2) *Legislation to control dealings in foreign exchange.*

49. We have now considered one device to correct the essential result of inflation, viz. active intervention on foreign places in support of the mark. Other factors were to play a much more decisive and costly rôle. These refer to the use made of—

(*a*) Foreign bills of exchange accruing from exports;

(*b*) The Reichsbank's foreign bills' portfolio;

(*c*) The special levies and seizures of foreign currencies in private hands.

(*a*) *Foreign bills of exchange accruing from exports.*

50. The occupation of the Ruhr played havoc with Germany's power to export, and consequently jeopardized that share of export bills of exchange that accrued to the Reich under the system of export control that had been set up (so-called "Aussenhandelsstellen"). These foreign bills formed the normal source from which the Devisenbeschaffungsstelle* met the Government imports of foods, fats, and such-like necessaries. Now, while the average return was kept up from January to March, 1923, as the currencies then accrued from exports that had been made three months previously, the pinch began to be felt in April, when the daily average fell, *i.e.* precisely at the time when the Reich was called upon to make yet greater efforts to ensure the supply of food and to maintain the spirit of passive resistance.

(*b*) *Reichsbank foreign bills' portfolio.*

51. The Reich was thus faced with the double task of meeting the costs of these necessary imports, and simultaneously of trying to stop the downward trend of the mark. To that end a raid was made on the foreign bills' portfolio of the Reichsbank. The figures

* Foreign exchange operations of the Government were centralized in this office; in reality a foreign-exchange bank owned and operated by the Reich.

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were never divulged, but it was common knowledge at the time that the bank was practically depleted.

52. By the law of March 2, 1923 (Statute Papers, Vol. I, para. 155), the Reich was empowered to issue Dollar Treasury bills for 50 million dollars (or 210 millions of gold marks)—the so-called " Dollarschatzanweisungen "—bearing no interest, but redeemable in three years (April 15, 1926) at 120 per cent. in cheque on New York or in gold at the option of the Reich. The Reichsbank accepted liability, as personal debtor, for the redemption. The object of the issue was to provide the Reichsbank with foreign bills for the purpose of influencing the rates of foreign exchange in order to cheapen foodstuffs and essential necessaries of life.

53. These Dollar Treasury bills could only be acquired against gold or foreign exchange ; but the issue did not go well, for with an ever-falling paper mark, little inducement existed for surrendering real gold values against very problematic Government scrip. From notices appearing in the German financial press at the time, it would appear that, by the middle of June, 1923, 53 millions of gold marks had been taken up by the public and 47 millions of gold marks by the banks and industrialists. At that time the exchange stood at 400 millions of paper marks to the £, and an attempt was made to hold it at that figure, for which purpose the banks were asked to take up another 27 millions of gold marks of these Treasury bills, while the accruing " Devisen " were thrown upon the exchange. Towards the middle of August, when the pinch was being acutely felt, the industrialists were called upon to subscribe another 50 millions of gold marks of these bills, with a view to paying for the imports of food, that had already been consumed but had not yet been paid for.

(c) *Regulation of foreign bills of exchange.*

54. During 1923 no fewer than 39 different ordinances were promulgated in regard to legislative control of exchange. The main objects of these measures were—

(1) An attempt to ensure that foreign currencies were not being bought and sold for purely speculative objects ;
(2) An attempt to acquire for the Government as much as possible of the available exchange.

55. Two measures must here be noted, as they form part of the scheme of mark intervention, viz. :—

(1) The tax on foreign currencies (Devisenabgabe).
(2) The seizure of foreign currencies (Devisenerfassung).

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(1) *Devisenabgabe* (Decree of August 25, 1923, Statute Papers, Vol. I, para. 833).

56. The amount payable by each person or body of persons was made dependent on the obligation which such a person or body of persons had to bear under the provisions of the "Law relating to a tax to ensure the Bread Supply." For every 10,000 paper marks payable as a first instalment under the Bread Supply law a company had to pay 2 gold marks, an individual 1 gold mark. It was hoped to secure in this way a fund of foreign currencies of £10—15 millions. The tax yielded 137 millions of gold marks (£6,850,000) by November 8, 1923, when it was abolished.

(2) *Devisenerfassung* (Decree of September 7, 1923, Statute Paper, Vol. I, para. 865).

57. By the end of the first week of September the exchange had reached 240 millions of paper marks for £. A new crisis had intervened, and it was then resolved to resort to extreme measures and to seize foreign currencies wherever they were to be found. To this end Dr. Fellinger was appointed "Devisenkommissar" with plenary powers, three paragraphs of the Reich's constitution being suspended to allow him full scope. People's houses and cafés were searched, letters opened, bill-brokers' transactions scrutinized, while bills of exchange accruing from exports were now centralized in the Commissioner's hands. It is estimated that these drastic measures produced about 100 millions of gold marks (£5 millions).

58. By the middle of September the position was broadly this: it could no longer be said that the mark fulfilled any longer the function even of a medium of exchange—it had lost all meaning as money. As regards public finances, the administration of taxes had completely broken down, and the Government was being carried on by the aid of the printing-press. Further, the maintenance of the spirit of passive resistance by the policy of market intervention in support of the mark merely succeeded in depleting the Reichsbank of that stock of gold which would have been useful in the reorganization of a new currency, while the inane system of trying to control exchange by legislative process proved entirely inadequate and was tantamount to trying to cure a symptom. No attempt was made to tackle the real disease.

59. On September 26, 1923, Dr. Stresemann took the plunge by announcing the complete abandonment of the policy of passive resistance; it was admitted that it was doing more harm to Germany than to France. In the beginning of October he attempted another

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step, viz. the adoption of an "Enabling Act" (Ermächtigungsgesetz), giving extensive extra-constitutional powers to the Government, for he perceived that nothing less than a virtual dictatorship was now necessary to meet the situation. The Socialists resigned from the Ministry, and Dr. Stresemann, again being called upon to form a Government, invited this time to the Finance Ministry Dr. Luther, who proved to be the man of the hour. Under threat of dissolution, Dr. Stresemann forced the Reichstag to pass the "Enabling Act," which was to herald a new era.

III.—The Period of Recovery, 1923–6.

60. Before passing to consider the new phase, it is important to consider a report on a plan for the stablization of the mark drawn up by international experts in November, 1922. It will be recalled that by the middle of May, 1922, the German Government informed the Allies that they were unable to continue the ten-day cash payments under the decision of the Cannes Conference, and asked for a moratorium. The subsequent months were passed in fruitless negotiations with the Reparation Commission, which finally resulted in a visit of the Commission to Berlin in November, 1922, to study conditions on the spot. It was at this time that the German Government invited to Berlin eminent experts from abroad to suggest means of stabilizing the mark.

61. In reply to the question whether stabilization was possible under the conditions then obtaining, the majority report, signed by Professors Keynes, Cassel and Jenks and the Hon. R. Brand, replied in the negative for two reasons:—

(*a*) *External.*

62. Any attempt to stabilize the mark would be futile so long as Germany was not relieved for a period from payments under the Treaty of Versailles. The length of the period of suspension would depend on the possibility of establishing a surplus in the German budget, but they believed that the period must be fixed there and then at two years at least.

63. The experts believed that any scheme of stabilization could only be provisional, pending a final settlement of the reparation question at an early date, but they thought that stabilization must be begun in advance of such a settlement.

64. Given such relief, the experts added that the success of any scheme would not depend on a foreign loan, but rather on industrial and budgetary developments within Germany, but the support of

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an international consortium would be of the greatest importance in its effect on public confidence, and they consequently recommended the initiation of negotiations.

(*b*) *Internal.*

65. Present conditions had thrown the statistics of the budget into complete confusion. It was a necessary condition of stabilization that the budget should be balanced, while stabilization was itself a necessary condition for the recovery of equilibrium.

66. The experts stated that the utmost economy in Government expenditure and the utmost rigour in the collection of taxes were of the first importance, while capital expenditure must be met by loans.

67. They found that the principal objection in the minds of many authorities to any plan of stabilization was based on pessimistic conclusions relating to the balance of trade. Professors Keynes and Cassel thought, however, that if the adverse balance had been so high as some people supposed, the purchase of mark assets by foreigners would have had to be put at an impossibly high figure. Their general conclusion was that the state of the trade balance was not an obstacle against stabilization, and that a sound currency was in itself a strong corrective to an adverse balance of trade and would bring into operation many forces tending towards equilibrium.

68. In the conditions that they postulated, the experts believed that an immediate stabilization was possible by means of Germany's own efforts. Indeed, certain technical conditions were present which rendered the position very susceptible to control, viz. :—

(1) The large gold reserve of 1,000 millions of gold marks (£50,000,000).

(2) The scarcity of currency.

(3) The degree of internal inflation and external depreciation.

At a rate of 3,500 marks to the U.S. dollar the gold of the Reichsbank then amounted to twice the value of the note-issue.

69. At the time when the report was written the dollar was quoted at 7,000 paper marks. The experts, however, regarded some rate between 3,000–3,500 marks as appropriate, the definite rate of stabilization to be fixed in reference to the internal purchasing power of the mark and to the position of the external exchanges at the time when their scheme would be put into operation. It is interesting to note that the figure of 3,000–3,500 marks to the dollar compares with the rate of 4,200,000 million marks per dollar which was adopted a year later.

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70. The Keynes-Cassel plan of stabilization contained the following features :—

(1) In return for a two years' moratorium the German Government to offer the Reparation Commission the following guarantees :—

(*a*) An independent Board of Exchange Control to be constituted, and the Reichsbank to hold adequate gold reserves at the service of the Board.

(*b*) The Board to purchase paper marks on demand, so long as such gold was unpledged, at a fixed rate to the dollar.

(*c*) The value of the Reich's floating debt not to be increased beyond a certain figure.

(2) The consent of the Reparation Commission having been obtained, the German Government to take the following measures :—

(*a*) To invite co-operation of an international financial consortium.

(*b*) To create a foreign-currency reserve on the basis of gold at the disposal of the Board in conjunction with foreign credits.

(*c*) To abolish all regulations in control of foreign exchange.

71. The Board of Exchange would then buy and sell foreign exchange on demand against paper marks at fixed rates. But the bank rate must be raised and dear money maintained until stabilization was secure.

72. Further, in order to attract back foreign currencies held abroad by Germans, the Board would (*a*) issue gold bonds guaranteed by the Reichsbank, at adequate interest, repayable in one or two years in gold or foreign exchange ; and (*b*) would buy foreign exchange spot and sell it forward at various periods at appropriate rates.

73. The question will now be asked : Why were the experts' conclusions not forthwith adopted ? Why did the German Government wait another year before tackling the problem of stabilization ? The answer to such questions is—

(1) That the settlement of the reparation question was not then within measurable distance, while the German Government hesitated to take the necessary drastic action to cover their deficits.

(2) The Germans still believed in the mark ; a mark was still a mark (" Mark gleich Mark "). It was not until it was universally realized that it had lost all meaning as currency that it was possible to make a fundamental change.

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74. That time did not come before the autumn of 1923, when the mark was repudiated by the masses. They then refused to accept worthless pieces of paper in return for goods. A radical change was then inevitable. By the end of October, 1923, the volume of currency during ten months had increased roughly two million times, while its external value had diminished in the same period to almost a ten-millionth part of its previous value.* Obviously there was no hope of improvement as long as the printing-press carried on at this pace. Recovery did, however, commence directly the unrestrained issues ceased. It was the marvel of the Rentenmark.

75. Currency-reform schemes were now in the air, of which the principal that came to light were :—

(*a*) A currency based upon a guarantee of material values (Helfferich and Minoux).

(*b*) A currency based upon the stock of gold and foreign currencies existing in Germany, supplemented by loans. This idea assumed two different directions :—

(1) A gold currency built upon purely *private* foundations (Schacht and Krämer).

(2) A *State* gold currency and the conversion of the public and private economy to a gold basis (Hirsch and Bernhard).

76. The suggestion that was finally adopted—the Rentenmark—was closely affiliated to Helfferich's idea of a Roggenmark (rye-mark), and to him must be ascribed the honour of invention. It should, however, be pointed out that, when the idea of the " Roggenmark " was being discussed, Dr. Luther was not only warned by a majority of economic leaders against the introduction of such a currency, but was strongly advised to insist on a gold currency. With rare intuition and an admirable understanding of the metaphysical elements, Dr. Luther chose the term " Rentenmark," whose basis, consisting on a lien on German agriculture and industry, inspired the public with adequate confidence.

* The figures are as under :—

	Notes in circulation.	Exchange on London.
	Milliards of paper marks.	Paper marks = £.
December 31, 1922	1,280	34,000
October 31, 1923	2,496,823,000	325,000,000,000

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77. The Rentenbank Ordinance was promulgated on October 15, 1923, but it was not until one month later that the new notes made their appearance. During this month there was an awkward currency interregnum whose main features it is important to observe. It was a period of chaos the like of which had not been seen in economic history.

78. The different currency tokens then in circulation comprised :—

(1) *Paper marks :—*

(*a*) Reichsbank notes.
(*b*) Authorized State paper-mark " Notgeld."
(*c*) Authorized railway paper-mark " Notgeld."
(*d*) Unauthorized industrial paper-mark " Notgeld."

(2) *Stable value currency :—*

(*a*) Small " Coupures " of the gold loan.
(*b*) Railway stable " Notgeld."
(*c*) The German State " Dollars."
(*d*) The municipal " Dollars."
(*e*) Gold certificates of the Hamburger Bank of 1923, etc.*

79. Such then was the position with which the German Government were faced.

The Rentenbank.

80. The purpose of the Rentenbank was twofold :—

(*a*) To provide a stable currency,
(*b*) To relieve the Reich's financial embarrassment.

It is important to observe that, as there was not a sufficient stock of gold equivalents available as cover for the new issue, the Rentenmark notes were guaranteed by mortgages on German landed property and by bonds on German industry (*i.e.* comprising all trade, commercial, banking and transport enterprises). These mortgages and bonds were for a combined amount of 3,200 millions of so-called Rentenmarks (or pre-war gold marks).

81. The following are the chief provisions of the Ordinance :—

(*a*) The capital and reserves of the Rentenbank amounted to 3,200 millions of Rentenmarks, subscribed in equal shares by

* Cf. Annex VII of the " Report of the First Committee of Experts (Dawes Committee)."

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agriculture and industry. The bank was independent, both as to administration and to business direction, from all Government interests and interference.

(*b*) The bank acquired on all agricultural properties a mortgage, expressed in gold, of 4 per cent. of the value of the property as assessed for the purpose of the Imperial Defence Levy (Wehrbeitrag) of 1913. The mortgage bore interest at 6 per cent., payable in Rentenmarks according to their gold value at the time of payment.

(*c*) On all industrial, commercial, trade, banking and transport undertakings, bonds in favour of the Rentenbank were made out to the same gold-mark amount as the total mortgage burden placed on agriculture, such bonds bearing interest at 6 per cent.

(*d*) Upon the basis of the foregoing agricultural mortgages and industrial bonds, the Rentenbank issued annuity bonds (Rentenbriefe) bearing interest at 5 per cent. These annuity bonds served as cover for the Rentenmark notes to a value not exceeding the value of the capital and reserves of the bank.

(*e*) The Rentenbank was permitted to grant the following credits :—

(1) *To the Reich:* a non-interest-bearing credit of 300 millions of Rentenmarks for the express purpose of paying off the Reich's Treasury bills discounted at the Reichsbank (floating debt), together with an interest-bearing (6 per cent.) credit of 900 millions of Rentenmarks during the subsequent two years.

(2) *To the Reichsbank and the private banks of issue:* a credit of 1,200 millions of Rentenmarks, for the purpose of supplying credit to private business enterprises.

(*f*) *Paragraph* 19 *of the Ordinance is of special importance.* In return for the foregoing credits the German Government formally undertook not to discount further Treasury bills with the Reichsbank as from the time when the Rentenbank started operations.

82. The first Rentenmark notes made their appearance on November 16, 1923, but only on November 20 could it be said that the era of astronomical calculations had ceased. The following were the Berlin quotations for a dollar during the period :—

	Marks for U.S. Dollar. (Millions.)
November 14	1,260,000
,, 15	2,520,000
,, 16	2,520,000
,, 17	2,520,000
,, 19	2,520,000
,, 20	4,200,000

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83. The important thing was now to find a convenient exchange relation between the old paper mark and the new Rentenmark. This came about—or was brought about—on November 20, when the mark fell exactly to one-billionth of its pre-war value, *i.e.* 1 U.S. dollar = 4·2 gold marks = 4,200,000 millions of paper marks. Henceforward, to find the equivalent of paper marks for Rentenmarks it was only necessary to knock off twelve noughts. But apart from this important expedient of the round number, it was possible to make the old paper marks do service in reinforcing the new Rentenmark issues; in other words, the Rentenbank was able to go slow in the new emissions, as the old paper marks, which were exchangeable at a fixed rate of one billion to one with the new currency, were supplying temporarily the need of circulating medium.

84. By the end of November, 1923, the note circulation was now capable of being expressed in gold values. The following table shows the extent to which the total amount of currency in circulation increased in value, the moment the confidence of the public in the currency was restored:—

[Millions of gold marks.]

	November 30, 1923.	December 31, 1923.
(1) *Paper marks*:—		
Reichsbank notes	400·3	496·5
Private bank-notes	0·1	0·1
Railway paper-mark "Notgeld"	114·8	109·0
Authorized paper-mark "Notgeld"	3·4	2·3
	518·6	607·9
(2) *Stable value currency*:—		
Rentenmarks	598·2	1,049·1
Gold loan	216·4	240·0
Railway "Notgeld"	35·4	141·9
Authorized "Notgeld"	216·2	234·7
	1,066·2	1,665·7
Grand currency total	1,584·8	2,273·6

85. Business relations began to resume normal conditions; the population no longer rushed to exchange their paper into goods. This was due to the combined effect—

(*a*) of definite limitation of the issues; and

(*b*) of public confidence, whether justified or not, in the value *behind* the note. It should of course be added that, apart

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from the foregoing internal factors, a part at least of the success of the Rentenmark was due to an arrangement that had been made on the 15th of August, 1923, under which the Reichsbank was allowed to keep accounts in foreign currency and thus enabled industry to carry on business on the basis not of German but of foreign exchange. This arrangement subsequently developed into the Gold Discount Bank, to which reference will be made below.

86. The real value of the mortgage guarantee may have been doubtful. What was not doubtful was public confidence in it. Dr. Helfferich and Dr. Luther gauged the psychology of the agricultural classes in Germany with astounding foresight. Helfferich, in particular, had been one of the advisers principally responsible for Germany's undue recourse to credit, and her failure to meet the financial requirements of the war by appropriate taxation. It is therefore of dramatic interest to note that he should have discovered, nine years later, one of the most successful instruments for stabilization; poison and antidote proceeded from the same source. By his advocacy of the Roggenmark scheme, he went far to show the path of recovery from the result of his previous advice.

87. The great change had then come about. The population had apparently received a currency, in the intrinsic value of which it had confidence, and of which the issues were definitely restricted by law. The era was over when they had to deal with a currency which made no pretence to backing of intrinsic value, whose amount was only limited by the ability to get work out of note-printers and their machines. The result was astonishing; in two months, *i.e.* by the end of the year, the gold value of the official authorized currency increased from approximately £10 millions to £113·6 millions, while the rate of exchange remained at the level fixed by authorities, and stability has been maintained ever since.

The budget based on gold.

88. Germany was now in possession of a new currency exchangeable at approximate parity with gold. The next point remains to be considered, how were the public finances adapted to the new conditions? Dr. Luther was eminently aware of the fact that the success of stabilization depended on the equilibrium of the budget, while stabilization was itself a necessary condition of the recovery of financial equilibrium.

89. The first task that faced the German Government was the

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liquidation of the immediate past. During the September negotiations that led to the formation of the Rentenbank and the issue of the new notes, the crux of the dealings between the Government and the representatives of agriculture and industry turned on the sum that the German Government would require to liquidate the past and to enable them to make a fresh start. The principal trouble was the grotesque floating debt, on which the State had been existing for years. The following table shows the final phase :—

Date.	Discounted Treasury bills, billions of paper marks (*i.e.* 000,000,000,000's omitted).	1 gold mark in terms of 1 paper mark at exchange of the day.	Approximate value in gold marks (millions).
September 20, 1923	7,000	43 millions	163
September 30, 1923	46,700	38 ,,	1,229
October 31, 1923	6,907,500	17·3 milliards	400
November 15, 1923	191,580,500	600 milliards	320
November 20, 1923	191,580,500	1 billion	191·6

90. Now, on September 20, 1923, the value of the floating debt at the (dollar) rate of the day was about 163 millions of gold marks, whereas, on the day that the bank started public business (November 15), the value of the floating debt was 320 millions of gold marks, and five days later, consequent on a further fall in the exchange, the value dropped to 191·6 millions of gold marks.

91. It will be recalled that under the terms of the Rentenbank Ordinance, in return for a promise not to discount further bills at the Reichsbank, the Reich was granted a non-interest-bearing credit of 300 millions of Rentenmarks for the express purpose of redeeming those Treasury bills. By October 15 these bills had attained the sum of 191·6 trillions* of paper marks : by November 20 the gold mark was worth one billion* of paper marks, so that it was possible to redeem the whole lot for 191·6 millions of gold marks. In this way the Rentenbank credit actually provided a margin of over 100 millions of gold marks which could be diverted to budgetary purposes. Thus the " round number " not only served the purpose of a convenient equation, but it was the means of liquidating old debts on a basis most advantageous to the debtor.

92. Relieved of this floating-debt incubus, with a reorganized currency and a credit available for the next few months, Dr. Luther

* " Billion " used in the English sense, *i.e.* million millions ; " trillion," *i.e.* million million millions.

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was able to prepare a gold budget for the remaining portion of the fiscal year, *i.e.* November 16, 1923–March 31, 1924. The main outlines were as under :—

General administration.

(1) *Ordinary budget.*

[All figures in millions of Renten or gold marks.]

Receipts.		*Expenditure.*	
(1) From direct taxes....	1,150	General administrative expenditure	1,966
(2) From indirect taxes	231		
(3) From Rentenbank credit....	585		
	1,966		1,966

(2) *Extraordinary budget.*

From Rentenbank credit	165	To liquidate Ruhr costs, etc.	165
	165		165

Public utility undertakings.

(1) *Railways.*

From funded loan	520	(*a*) Deficit in ordinary budget	100
		(*b*) Liquidation of costs in occupied territory	50
		(*c*) New construction	370
	520		520

(2) *Posts.*

(*a*) From Rentenbank credit....	50	(*a*) Deficit in ordinary budget	50
(*b*) From funded loan....	90	(*b*) New construction	90
	140		140

Execution of the Peace Treaty.

From ordinary budget of general administration	45	Internal expenditure in execution of Treaty	45
	45		45

Summary of the Reich credits from Rentenbank.

(1) Ordinary budget of general administration	585
(2) Extraordinary budget of general administration	165
(3) Posts	50
	800

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93. This transitional gold budget was based on the Rentenbank's interest-bearing credit of 900 millions of Rentenmarks (£45 millions). The interesting fact is to be observed in the table below, that the receipts from taxation began almost immediately to assume considerable proportions expressed in sterling, viz. £15 millions in December, £25 millions in January, £20 millions in February and almost £30 millions in March. This in itself was a wonderful achievement, when it is recalled that the tax returns of September, 1923, were £3 millions and of October about £1 million. These results were, of course, due to two causes :—

(*a*) The Rentenmark provided the basis of a stabilized currency.

(*b*) Not only was the policy of borrowing stopped, but in virtue of the three tax-emergency decrees (Steuernotverordnungen) all taxes were put upon a gold basis.

94. The returns of the transitional period were :—

[Millions of Renten or gold marks.]

	December, 1923.	January, 1924.	February, 1924.	March, 1924.
(*a*) *Receipts*—				
1. Taxes	312·3	503·5	418·0	595·3
2. Gold loan....	—	3·0	0·3	—
3. Fees, etc.	21·5	17·1	27·1	37·1
	333·8	523·6	445·4	632·4
(*b*) *Payments*	668·7	525·5	583·9	591·2
(*c*) *Deficit or surplus of receipts as against payments*	−334·9	−1·9	−138·5	+41·2
(*d*) *Percentage of tax yield to payments*	46	95	71	100

95. The results provided ample proof of the wisdom of Dr. Luther's policy. Whereas the transitional budget estimates reckoned upon a tax yield of 1,381 millions of Rentenmarks (£69,050,000) for the period November 16–March 31, or a monthly average of 307 millions (£15,350,000), the actual returns of the four months (December 1–March 31) produced (inclusive of administrative fees) 1,931·9 millions of Rentenmarks (£96,595,000), or a monthly average of 483 millions (£24,150,000), or 57 per cent. more than the estimates. Further, we should not fail to notice that, while the yield from taxes in October

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only covered 1 per cent. of the outgoings, the corresponding percentages were :—

	Per cent.
(*a*) In December	46
(*b*) In January	95
(*c*) In February	71
(*d*) In March	100

96. To sum up, the year 1923 will always be remembered as the *annus mirabilis* of Germany's financial history. It witnessed the greatest break-up, as well as the most remarkable recovery, of a modern nation's currency and public finances. Nothing can be compared either to the abysmal depths to which the finances fell or to the extraordinary recovery that followed the reorganization of the currency.

97. It is noticeable that the reorganized currency was not based on gold. A gold basis was not possible, as (1) Germany had only a gold reserve of 467 millions of gold marks (£23·3 millions), of which 210 millions (£10,500,000) were ear-marked for the redemption of the Dollar Treasury bills (to which reference was made above), or a net free sum of 257 millions of gold marks (£12,800,000) ; (2) No foreign country would provide gold in the then condition of German finances. Confidence was created mainly through restriction, assisted by a more or less illusory mortgage—a combination of physical and metaphysical elements, which future currency reformers would do well to study.

Stabilized conditions.

98. Although the foundations were well and truly laid in the winter of 1923, the real significance of the Luther-Schacht reforms were only to be felt in 1924. In the meantime, it should be added, the atmosphere in regard to the reparation question had undergone a remarkable change, and an Experts' Committee had been formed "to consider the means of balancing the German budget and the measures to be taken to stabilize the currency." These reforms were at last recognized as the indispensable basis and the pre-condition of any durable reparation payments, a condition of affairs largely rendered possible by the strenuous labours of Lord Bradbury.

99. Dr. Schacht, who in the darkest days had been appointed Reich's Currency Commissioner, did not wait for the Experts to report on the measures necessary to stabilize the currency. By the time that the Committee had reported (April 10, 1924) the Rentenmark had been maintained at par with the American dollar for almost

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five months and it has remained at parity ever since. How was it done ? On what principles did Dr. Schacht proceed ?

100. The cardinal point of course is, that the new issue was strictly limited and based on a security which the public believed to be sound. The currency situation in Germany would have been equally chaotic under the new regime if the authorities had proceeded to issue unlimited quantities of the new Rentenmark notes. But under the provisions of the Ordinance the entire issue was limited to 3,200 millions of Rentenmarks. As a matter of fact, however, Dr. Schacht, in his quality as Currency Commissioner and, later on, as President of the Reichsbank, kept the issues under check, and the Rentenmark circulation never exceeded 2,000 millions, of which the Reichsbank at the start was careful to keep in its own portfolio 200–400 millions, so that the effective circulation was generally about 1,600–1,800 millions of Rentenmarks.

101. The next task with which Dr. Schacht was faced was to withdraw the " Notgeld " from circulation. In this connection it is important to note that the first issues of the Rentenmarks were made against corresponding withdrawals of " Notgeld " from circulation. This was an important step, as it enabled Dr. Schacht to keep the currency during the critical period of transition at round about the same level.

102. From November, 1923, the quantity issued was gradually increased from approximately 1,600 millions of gold marks (£80 millions) to 2,633 millions in February, 1924 (£131 millions). During the course of the month of March, 1924, the circulation actually touched 3,000 millions of gold marks (£150 millions). At this juncture the mark exchange in New York began to show signs of weakness which Dr. Schacht took as a " danger signal." Steps were immediately taken to contract the circulation. The effect was instantaneous, the mark rising again to parity with the dollar.

103. The success of the policy of currency stabilization also depended on three great factors :—

(1) Credit restrictions.

(2) The institution of the Gold Discount Bank.

(3) The so-called " Einheitskurs " (*i.e.* a mark rate of exchange pegged to the United States dollar).

104. Dr. Schacht, as part of his stabilization policy, created the Gold Discount Bank, and sterling credits (for the bank was established with the aid of a loan of £5 millions from the Bank of England) were made available for the financing of imports necessary

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for the manufacture of German goods destined later for exportation and of that part of home production, payable in German currency, that was likewise intended for export.

105. On April 7, 1924, as part of the same plan, the policy of drastic credit restrictions was introduced, which succeeded in making Dr. Schacht temporarily the most unpopular man in the Reich. All rediscount business on the part of the Reichsbank was severely "rationed," and marks became almost unobtainable. It should be observed that the Rentenmark was never made legal tender (although it was accepted up to any amount in payment of taxes, etc.), this quality being alone held by the paper mark, which, for the purposes of foreign exchange, remained the sole official currency.

106. But the main thing was that the Reichsbank was complete master of the foreign-exchange market. The so-called "Einheitskurs" was a real weapon of protection. By means of this device a uniform mark-rate was maintained, based on the United States dollar, for all other foreign currencies. In other words, as a buyer of foreign exchange the Reichsbank gave to the seller of, say, Swiss francs, the counter-value in marks which these francs would have fetched if converted into dollars. At the same time, the Reichsbank was the only seller of foreign exchange at the time.

107. To sum up, the measures taken to maintain stability in the early days were :—

(1) New issues of Rentenmarks were only issued in the beginning against corresponding withdrawals of "Notgeld."

(2) When it became apparent that there was an over-issue of currency, steps were at once taken to contract the amount.

(3) Although the Rentenbank had authority to issue up to 3,200 millions, the effective circulation never exceeded 1,600–1,800 millions.

(4) The credit restrictions made marks scarce.

(5) By the adoption of the "Einheitskurs" and the institution of the Gold Discount Bank the Reichsbank was master of the foreign-exchange market.

108. The currency figures for the first six months of 1924 are :—

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Currency in circulation.

[In millions of gold marks.]

Category.	January 31.	February 29.	March 31.	April 30.	May 31.	June 30.
(1) *Bank notes*—						
(*a*) Reichsbank	483·6	587·9	689·9	777·0	926·9	1,097·3
(*b*) Rentenbank	1,196·3	1,563·8	1,760·3	1,708·8	1,728·5	1,771·6
(*c*) Private banks of issue	—	—	—	—	—	—
(2) *Coins*	1·1	5·8	25·9	85·2	138·5	194·7
(3) *Miscellaneous Instruments of payment* (gold loan, railway and authorized "Notgeld")	596·7	476·0	348·1	254·2	123·7	65·0
	2,277·7	2,633·5	2,824·2	2,825·2	2,917·6	3,128·6
Percentage of normal average circulation in 1913	37·3	43·3	46	46	46·8	47·5
Gold reserve of Reichsbank	467·0	464·0	464·8	441·9	441·9	462·2
Proportion of gold to Reichsbank notes in circulation .... per cent.	96·5	79	67·3	56·9	47·6	42·1
Proportion of gold to all currency in circulation (including "Notgeld") per cent.	20·5	17·5	16·6	16·1	15·9	15·8

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IV.—CONCLUDING OBSERVATIONS.

109. It may be asked what lesson can be drawn from the experience of Germany during the period of inflation. In my judgment the principal lesson is that the stability of a currency cannot be restored after a period of inflation, unless and until the following interdependent preconditions are present :—

(1) The issue of paper notes must be strictly limited if exchange is to remain stable ;

(2) Strict limitation must be proclaimed in such a manner as to inspire confidence in the public.

110. A disastrous fall is brought about not only by a volume of new issues in excess of the currency requirements of the country, but also by the belief on the part of the public that no strict rationing of currency will be carried out by the issuing authority. The change which took place in Germany in October-November, 1923, was less one from a large issue of notes to a small issue of notes, than one from an unlimited issue to a strictly limited issue—to an issue limited by the maintenance of a stable exchange.

111. I have already said in these notes that Dr. Luther and Dr. Schacht are entitled to great credit for the measures which they carried through in the autumn of 1923. Dr. Luther's views on the subject of currency regulations were emphasized by his experience on that occasion ; he became more than ever a believer in the quantity theory. I agree with him in his belief in that theory but not in the categorical and unrestricted form in which it is expressed in many text-books. It used, for instance, to be taught that in virtue of the quantity theory the value of currency varied inversely with the quantity. To quote Professor Taussig (*Principles of Economics*, vol. i, chap. 18) : " That an increase in quantity tends to lower value is a proposition holding good of all commodities. The special proposition concerning money is that its value tends to vary precisely in proportion to its quantity." German experience has proved that such a rule requires wide qualification both on the down grade and the up, *i.e.* both in the months of falling exchange and in the months of recovery. I would therefore add that the allowance made for the velocity factor must be far greater than is generally admitted. The fact that the total official authorized circulation in Germany increased from about £10 millions sterling on October 1 to almost £80 millions on November 30, and to £113·6 millions by the end of that year, shows the immense fluctuations in amount of circulation which can proceed from the metaphysical factor. These

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conclusions are supported by German experience even after taking into account the concomitant withdrawals of "Notgeld"—or private emergency currency—which occurred in Germany. Absence of public confidence leads to a velocity of circulation so great that a very small amount of currency is made to fulfil the requirements of the public. Directly confidence returns, that velocity diminishes to such an extent that the public retain currency longer, and absorb for their circulation requirements a far larger aggregate amount without depreciation of exchange. Moreover, in circumstances like those which prevailed in Germany, there is a marked under-pricing of commodities compared with their price in other countries. Articles and services were offered in Germany on extraordinary low terms. For instance, a golf caddie cost 1*d.* per 18 holes, a hotel room cost 8*d.* to 1*s.* per night, while a cab-fare was measured in pence or a fraction of 1*d.*

112. Velocity of currency is itself determined to a large extent by confidence among the public that undue issues will not be made. Strict limitation must therefore not only be maintained, but must be proclaimed in such a manner as to carry confidence. In so far as the above holds true, velocity is not a rival of the quantity theory but a necessary part of it. Velocity is increased by the issue of an undue quantity being apprehended—in other words, by absence of confidence in a strict observance of the quantity theory. The fact should again be emphasized that all the measures which are constantly attempted by Governments with depreciating exchange, to impose artificial restrictions on foreign exchange operations, have merely the effect of accentuating the lack of confidence of their people in the home currencies.

113. The main difficulty in arresting the decline of a depreciated currency proceeds from the fact that, in almost all cases, an apparent deficiency of circulating medium exists. Money is dear, financial facilities are difficult to obtain. How, under these circumstances, can a more stringent and definite limitation of the currency medium be advocated? Can it be put in force without a panic?

114. The fact, however, has to be realized that large and unrestricted issues, not adjusted to and limited by a definite price-level in foreign exchange, do not increase the aggregate value of the currency medium in circulation. They reduce it. This was seen both in Germany and France. The fall in value of each individual note issued was greater than the increase in the number of the total notes in circulation. Value did not vary precisely in inverse ratio to quantity: value fell more than quantity increased. The faster the printing-press worked, the more notes it turned out, the less the total value

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(in gold or foreign exchange) of the total currency in circulation. History shows that Governments seldom have the courage and the decision requisite to apply a radical cure. The timid application of palliatives, the mild retardation of the issue of notes, produce no cure. The case is somewhat similar to that of inebriety, where the process of tapering and gradually reducing the amount of alcohol consumed by the inebriate has been found ineffective. Tapering is not less dangerous in currency than in alcohol. A sudden, firm and strict limitation is the only remedy.

115. There is a kind of ironical justice in the fact that the classes in Germany who in the end suffered the most heavy losses from inflation were those who were the most favourable to it in the early stages. They imagined that loans contracted on a given date and repayable six months later in paper would be repaid by them on very advantageous terms, provided large note-issues continued to be made. They not unnaturally held that a currency dispensation which facilitated such a pleasant business could not be wholly vile or radically unsound. As long as currency depreciation remained within moderate limits their calculation was sound, but the final result was that, when the ultimate crash came, all the profits which had been acquired through this astute calculation vanished in the catastrophe, and the excessive issues which they had favoured led to the confiscation of so large a portion of their holdings that their temporary gains were more than swept away.

116. It may almost be said that the only net gainer from extreme inflation and subsequent stabilization was the State, which, as debtor, found itself relieved of nearly the full burden of its previous obligations. Other classes who obtained relief from previous obligations of debt had a considerable losing account to set against the relief they obtained. It can hardly be said that the net result to any class of private debtor was wholly beneficial, once the full circle had been completed. It might have been expected that the State, having in result defaulted upon its previous debts, would lose greatly in credit and would, at any rate in the near future, be considered by the public as an unreliable debtor. But this result did not accrue. The maintenance of confidence and the continuance of the habit of saving are the more remarkable when one considers the total amount sacrificed by creditors. The total relief to State finance by stabilization at $\frac{1}{1.000.000.000.000.000}$ (minus "Aufwertung," or revalorization at 2½ per cent.) has been computed at 80,000 millions of gold marks (£4,000 millions sterling), to which may be added £1,000 millions savings-bank deposits (with "Aufwertung" at 25 per cent.), £900 millions mortgage debts (with "Aufwertung" at 25 per cent.),

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and an unknown quantity of private debts, debentures, etc. It would not be an exaggeration to say that the total relief to debtors, public and private, was round about £10,000 millions sterling. So gigantic a lapse in credit might well have given a permanent blow to the saving habit, but the currency adventures of Germany have not produced this effect on the German public. At no time in German history has the desire to save been stronger than it is to-day, at no time has the habit of saving been more widely spread. From all sides and from all parts of Germany it is reported that the desire to put money by, to invest it, to place it in savings banks and other deposit-bank institutions, is wider than it was before the war. The fear that the debtor may not observe his engagements is overpowered by the consideration that he has not much to repay, having cleared off all his previous indebtedness. The man in all the world least likely to fall short of new engagements is the man who owes nothing. It is the " vacuus viator " in a new guise. Of incapacity to pay there can be no question, while the temptation to default diminishes in direct ratio with indebtedness.

117. Reference might here be made to another element in the problem. One of the most dangerous heresies regarding foreign exchange is the supposition that it is fundamentally dependent upon and is governed by the balance of trade. This easy explanation, which finds no support in any parallelism between the larger curves of exchange and trade balance, has been so widely adopted that it is responsible for much that is erroneous, and indeed disastrous, in the financial policy of countries involved in currency difficulties.

118. In Germany general belief in this theory diverted alike theorists and financiers from the search for a true explanation of the phenomena, and probably deferred stabilization for nearly two years.

119. This theory may be viewed as a confusion of cause with effect; or, again, it may be held that it is a confusion between influences which affects the wave movement on the surface with the more powerful forces which govern tidal action below. The surface may be ruffled; the tide flows on.

120. It is true that in Germany a desire to redress the balance of exports and imports did not lead, as it has done in some other countries, to measures for the reduction of personal expenditure or to any sumptuary edicts. These would have been resented by the population and evaded. It would have been widely felt that, whatever might be the true explanation of the currency disorder from which the country was suffering, a remedy was not to be found in prayer and fasting and that self-mortification could be no cure for a depreciated mark.

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121. The German example points to the general conclusion that recovery from a position of catastrophic exchange and inflation requires certain conditions. These are as indicated above:—

(1) Strict limitation of the amount of currency, implying and involving a resolute avoidance of budget deficits.

(2) A formal proclamation of limitation of such a nature as to inspire belief. Further,

(*a*) A definitely fixed and unalterable level of exchange maintained by a national bank or other organization endued with adequate funds and adequate fixity of purpose.

(*b*) A new form of currency replacing the old discredited currency, public confidence being more easily accorded to a new issue than restored to one already discredited.

(*c*) An imaginative element stimulating public confidence in the new issue.

122. Apart from physical conditions, a metaphysical element is requisite. In Germany this was supplied by the Rentenmark. The guarantee behind the Rentenmark might have proved, in last analysis, illusory, and was generally so considered by experts, but the issue commanded the confidence of the public. Confidence was indeed engendered not only by the questionable guarantee established through the Rentenbank but by the illusion of a guarantee which had been discussed under a previous scheme and abandoned, namely, the proposal that every note should represent a given quantity of rye. This scheme was dead, but a certain aroma of confidence lingered in the air, produced by the belief that the tangible guarantee of a definite quantity of grain existed.

123. The doubtfully real was thus reinforced by the certainly non-existent.

124. In matters of currency the psychological factor cannot be neglected, but it is subordinate and ancillary to the material conditions set out above.

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